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Update from the Program

During the first three months of 2020, the Arkansas Prescription Drug Monitoring Program (PDMP) provided education on the program at various conferences, began running reports to identify errors in reporting, notifying pharmacies of errors, and finalized the amendments to the Rules Pertaining to the Prescription Drug Monitoring Program with legislative updates from the 2019 Legislative Session.

However, due to COVID-19 causing staffing reassignments at the Arkansas Department of Health many projects planned for the program were delayed. PDMP staff assisted in COVID-19 testing data submission, COVID-19 hotline call center, case investigations, employee health screenings and out-of-state/flight COVID case investigations. Even while the program was affected by COVID-19 reassignments, the PDMP was able to shift activities typically in-person to a virtual platform, such as educational presentations and PDMP Advisory Committee meetings.

In June, the PDMP performed the first delegate re-verification in which all delegate accounts were re-verified by the supervising account holder. If not reverified, delegate access was suspended.

The PDMP was awarded the FY2020 Harold Rogers Prescription Drug Monitoring Program grant from the Bureau of Justice Assistance that is funding two additional positions within the PDMP, a registered pharmacist and a health program specialist II, that will evaluate the data reported to the PDMP by pharmacies and other dispensers.

In 2020, the AR PDMP began interstate data sharing with the St. Louis County PDMP and Florida PDMP. The program began a statewide integration of the Prescription Drug Monitoring Program into electronic health records, pharmacy dispensing software and health information exchanges funded by the Centers for Disease Control and Prevention: Overdose Data to Action grant. And in December 2020, the Veterans Health Administration (VHA) systems in Arkansas enabled the integration of the PDMP into the VHA electronic health records.
PDMP Usage

Who’s using the PDMP?

The PDMP allows access to many different users. Access to the PDMP system occurs through a secure website, which requires authorized users to log in with a password. User accounts are granted to physicians, pharmacists, dentists, medical residents, physician assistants, veterinarians, nurse practitioners, Medicaid pharmacy program officials, law enforcement, regulatory boards, the state medical examiner, and prescriber and pharmacist delegates. All users must be approved for access according to statutory requirements. The number of user accounts are constantly increasing due to many factors, such as mandatory usage, internal office policies, etc. In 2020, the AR PDMP had 2,257 new accounts registered.

Table 1: Number of New Registered PDMP Accounts, Arkansas 2020

<table>
<thead>
<tr>
<th>Role</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician (MD/DO)</td>
<td>357</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>231</td>
</tr>
<tr>
<td>Prescriber/Pharmacist Delegate</td>
<td>1,085</td>
</tr>
<tr>
<td>Adv. Practice Nurse</td>
<td>314</td>
</tr>
<tr>
<td>Dentist</td>
<td>79</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>45</td>
</tr>
<tr>
<td>Optometrist</td>
<td>2</td>
</tr>
<tr>
<td>Podiatrist</td>
<td>4</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>6</td>
</tr>
<tr>
<td>Veterinarian</td>
<td>9</td>
</tr>
<tr>
<td>Medical Resident</td>
<td>111</td>
</tr>
<tr>
<td>VA Roles</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,257</strong></td>
</tr>
</tbody>
</table>

Source: AR PDMP
“Doctor Shopping”

In an effort to curb the misuse of controlled substances, the PDMP alerts prescribers and dispensers of patients who seem to be “doctor shopping.” “Doctor shopping” is defined as a patient going to multiple providers (prescribers and pharmacies) to obtain the same prescription or same class of medication. The PDMP flags patients who get multiple controlled prescriptions from multiple prescribers and fill the prescriptions at multiple pharmacies.

In previous years, the threshold for this type of clinical alert was when a patient received controlled prescriptions from seven prescribers and seven pharmacies in 90 days. However, the number of “doctor shopping” patients identified was low, which resulted in a lowering of the threshold. The new threshold is met once a patient receives controlled prescriptions from five prescribers and five pharmacies in 90 days (5/5/90), at which point a clinical alert is sent out to all providers and dispensers with PDMP accounts the patient has had prescriptions with. Since quarter one (Q1) of 2017, the state has seen a decrease in “doctor shopping” of the 5/5/90 by more than 86% (Figure 1). For 2020, the average number is 43 individuals identified per quarter.

Figure 1: Individuals with Prescriptions Dispensed from Five or More Prescribers and Five or More Pharmacies per Quarter, Arkansas 2017–2020

Source: AR PDMP
Interstate Data Sharing

The opioid crisis does not stop at state borders. Soon after states began establishing PDMPs, authorities recognized the need to share information between states. PDMP data are shared between states through two different interfaces called PMP Interconnect and RxCheck. All the states in the country have a statewide PDMP with the exception of Missouri (In 2021, Missouri passed legislation to adopt a statewide PDMP). The St. Louis County PDMP has 75 jurisdictions encompassing 80% of Missouri’s population. Interstate data sharing allows prescribers, pharmacists, and their delegates in Arkansas to see what controlled medications their patients have received in the 38 other states, Puerto Rico and the Military Health Systems PDMP with whom Arkansas currently shares data. The data sharing is bi-directional; Arkansas users can view information from other states and the other states are able to see prescription data in Arkansas. Sharing data across state lines prevents patients from “doctor shopping” from one state to another (Figure 2). Arkansas will continue to share data with other state and federal PDMPs as allowed by statute; furthermore, the non-sharing states in white are with states in which AR does not have a data sharing agreement or state laws prohibit data sharing.

Figure 2: U.S States that share PDMP Data with Arkansas, 2020
Prescription Drug Use

Data by Drug Classes

The top-selling controlled prescription drug class in 2020 in Arkansas filled by Arkansans from Arkansas prescribers, was opioids. Opioids are medications used primarily to treat pain. This class of drugs includes hydrocodone, oxycodone, morphine, and others. Over 2.75 million prescriptions with almost 140 million individual pill units sold to Arkansas residents in 2020.

The second top-selling controlled class was benzodiazepines (Benzo), such as alprazolam and diazepam, which can be prescribed for anxiety, panic attacks, insomnia, seizures, and muscle spasms. In 2020, over 1.4 million Benzo prescriptions were sold to Arkansans that equated to 70.5 million pills.

Ranking third in the top-selling list is the stimulant class with drugs such as dextroamphetamine and methylphenidate. Stimulants are mostly indicated for attention deficit hyperactivity disorder (ADHD) and narcolepsy. In 2020, 933,271 stimulant prescriptions sold to Arkansans totaled 32 million pills (Table 2).

The fourth top-selling controlled class was sedative/hypnotics, such as zolpidem, zaleplon and eszopiclone. Hypnotics are prescribed for the treatment of insomnia. In 2020, Arkansans were sold over 507,000 prescriptions of sedative/hypnotics that accounts for 14.8 million pills sold.

Rounding out the 5 top-selling controlled class is the muscle relaxant class, specifically carisoprodol. In 2020, 51,000 controlled muscle relaxant prescriptions were dispensed to AR residents with a total of 3.1 million pills sold.
Table 2: Top Selling Prescription Drugs by Class for AR Residents by AR Prescribers, Arkansas 2020.

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Number of Prescriptions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioid</td>
<td>2,750,385</td>
</tr>
<tr>
<td>Benzo</td>
<td>1,480,396</td>
</tr>
<tr>
<td>Stimulant</td>
<td>933,271</td>
</tr>
<tr>
<td>Sedative/Hypnotic</td>
<td>507,885</td>
</tr>
<tr>
<td>Muscle Relaxant</td>
<td>51,890</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,723,827</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Number of Pills Sold**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioid</td>
<td>139,917,568</td>
</tr>
<tr>
<td>Benzo</td>
<td>70,584,927</td>
</tr>
<tr>
<td>Stimulant</td>
<td>32,167,638</td>
</tr>
<tr>
<td>Sedative/Hypnotic</td>
<td>14,867,368</td>
</tr>
<tr>
<td>Muscle Relaxant</td>
<td>3,111,410</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>260,648,911</strong></td>
</tr>
</tbody>
</table>

*Number of prescriptions includes all dosage forms – liquids, patches, tablets, capsules, suspensions, etc.

**Number of Pills Sold – only solid dosage forms, ie. capsules, tablets, pills, etc. Does not include liquids, suspensions, patches, injections, sprays, etc.

Source: AR PDMP (Drug class identified by merging data set with the 2020 CDC list for opioids and AHFS Pharmacologic – Therapeutic Classification)
County Rates for Opioids

For the state, the opioid dispensing rate per 100 people in 2020 was 82.59. This means that for every 100 people, there were nearly 83 opioid prescriptions dispensed in the state. Even though this number has been decreasing in the past couple years, Arkansas is almost double the Centers for Disease Control’s (CDC) determined national average rate of 43.3 per 100 in 2020. Only one county in Arkansas was below the national average by the CDC calculation, Miller County at 34.08. The counties with the highest dispensing rates are Poinsett (147.31), Montgomery (128.3), Ouachita (126.97) and Greene (123.69) (Figure 3). Counties are determined by the addresses of the patient who received the prescription. Therefore, the map does not reflect the rates of prescriptions from providers in each county, but instead rates of prescriptions received by individuals in the county.

Figure 3: Opioid* Dispensing** Rates per 100 People per County Based on the Address of the Patient, Arkansas 2020

*Excludes buprenorphine
** Limited to prescriptions by AR providers

Source: AR PDMP
CDC vs. AR PDMP Rates

Both the Centers for Disease Control and Prevention (CDC) and the Arkansas Prescription Drug Monitoring Program (AR PDMP) track the opioid dispensing rate per 100 people. The CDC Dispensing Rate is based on a sample of approximately 50,000 retail (non-hospital) pharmacies, which dispense nearly 90% of all retail prescriptions in the United States. For this database, a prescription is an initial or refill prescription dispensed at a retail pharmacy in the sample and paid for by commercial insurance, Medicaid, Medicare, or cash. This does not include mail order prescriptions. The AR PDMP Dispensing Rate includes prescriptions dispensed at any AR retail pharmacy prescribed by an AR prescriber for an AR resident for 2015, 2016, 2017, 2018, 2019, and 2020. The AR PDMP rate is more specific to Arkansans and accounts for all prescriptions reported to the AR PDMP as compared to the CDC rate that is only a sample of the data (Figure 4).

Figure 4: Opioid* Dispensing Rate per 100 People: CDC versus AR PDMP Rates, 2015-2020

*excludes buprenorphine products

Source: CDC & AR PDMP
Problems Related to Drug Misuse

Neonatal Abstinence Syndrome

Neonatal Abstinence Syndrome (NAS) is a group of symptoms that an infant may experience resulting from drug exposure during pregnancy.

Since 2000, the rate of NAS per 1,000 hospital births increased from 0.3 per 1,000 births to 3.2 per 1,000 births in 2019 (Figure 6). This is a decrease from the 2017 rate of 4.8 per 1,000 births and 4.5 per 1,000 births in 2018.

The demographic breakdown of NAS cases in 2019 show the condition is more common among white than non-white Arkansans. Comparing the mother’s insurance coverage, NAS rates for women with Medicaid were more than twice as high as women with other types of insurance. NAS rates in the northeast, northwest, and southwest regions of Arkansas show some of the highest rates.

Figure 6. Rate of neonatal abstinence syndrome per 1,000 hospital births, Arkansas residents, 2000-2019*

*Does not include births to Arkansas mothers occurring in out-of-state hospitals
Source: Hospital Discharge Data Systems, ADH
ADH Neonatal Abstinence Syndrome 2000-2019 Report
Overdose Death Rates

According to the Arkansas Department of Health Vital Statistics Section, provisional data based on death certificates indicate that 547 Arkansas residents died from a drug overdose in 2020. This number is an increase from the 426 overdose deaths in 2018 and 352 overdose deaths in 2019. The overdose death rates vary by county, with some of the higher-ranking counties found in central, northeast, southeast and southwest Arkansas (Figure 7). Counties are determined by the individual’s address of residence.

Figure 7: Age-Adjusted Overdose Death Rates per 100,000 People per County Based on the Individual’s Address-Arkansas, 2020*

Source: Vital Statistics, ADH

*2020 data are provisional
EMS Naloxone Administration Rates

Emergency Medical Services (EMS) and other first responders are usually the first on scene to a suspected overdose. Across the state, EMS and first responders are trained and equipped to identify and administer the opioid overdose reversing agent called naloxone. Naloxone is administered to a patient with a suspected opioid overdose; however, the person may not have an opioid overdose. Therefore, just because naloxone is administered is not indicative of a confirmed opioid overdose. Additionally, the rates below may include situations where more than one naloxone administration occurred for just one patient. If a patient does not respond to the naloxone, then EMS can continue to assess the patient for other causes of distress.

In 2020, the counties with the highest rates of naloxone administrations per 100,000 people are Saint Francis (260.1), Woodruff (253.2), Franklin (231.4) and Monroe (223.8) counties (Figure 8).

Figure 8: Naloxone Administration Rates per 100,000 People per county by EMS-Arkansas, 2020

Source: Emergency Medical Services and Trauma, ADH
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